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Reliable optimization of the PEMFC stack efficiency for automotive application

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Knowledge for Tomorrow



Outline

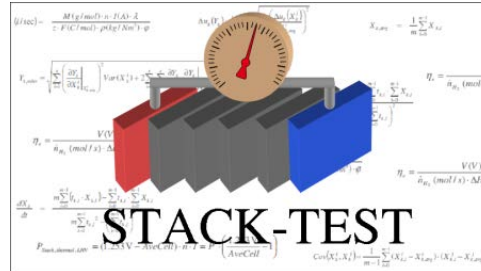
- Common use of stack efficiency
- Redefinition of stack efficiency
- Stack performance optimization method
- Optimization results of stack efficiency
- Conclusion



Conclusion

- Redefinition of fuel cell efficiency on the stack level:
 - New figure of merit including media conditioning
 - Considering conditions in the system
- Stack performance optimization:
 - Use of Nelder-Mead algorithm
 - Different optimization functions (and combinations)
 - Optimized operating conditions depend on load level
 - Parameter optimization for look-up tables etc.





Thank you very much for your attention!



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